

## CLAIMS

What is claimed and desired to be covered by Letters Patent is:

1. A system for accessing the brain of a subject to record and/or stimulate brain states thereof, the system comprising:
  - (a) control means;
  - (b) first accessing means having a plurality of contact surfaces to operatively connect the control means to the brain of the subject to provide access for the purposes of obtaining three-dimensional recordings of the brain electrical activity of the subject; and
  - (c) second accessing means having a plurality of contact surfaces configured to operatively connect the control means to the brain of the subject to provide three-dimensional stimulation thereof;
  - (d) a waveform bank containing a plurality of stimulating waveforms; and
  - (e) wherein the control means is configured to operatively apply a first at least one of the stimulating waveforms of the waveform bank to the brain of the subject through the first accessing means and to assess acceptability within defined limits, as determined by preset criteria, of the subject's response to the application of the at first least one of the stimulating waveforms.
2. The system as described in claim 1 wherein the control means continues applying the first at least one of the stimulating waveforms to the brain of the subject.

3. The system as described in claim 1 wherein the first accessing means utilizes selected prongs of a multi-probe electrode and the second accessing means utilizes other selected prongs of the same multi-probe electrode.
4. The system as described in claim 1 wherein the control means continues applying the first at least one of the stimulating waveforms to the brain of the subject after the control means determines from the preset criteria that the subject's response to the application of the first at least one of the stimulating waveforms is within acceptable defined limits.
5. The system as described in claim 1 wherein the control means discontinues applying the first at least one of the stimulating waveforms and applies a second at least one of the stimulating waveforms to the brain of the subject after the control means determines from the preset criteria that the subject's response to the application of the first at least one of the stimulating waveforms is not within acceptable defined limits.